

February 25, 2016

#### CERTIFIED MAIL NO. 7014 2120 0003 5408 7015 RETURN RECEIPT REQUESTED

Office of Enforcement and Compliance Assurance Office of Federal Activities International Compliance Assurance Division (2254 A) Environmental Protection Agency 1200 Pennsylvania Ave., NW Washington, DC 20460

Re: 2015 Annual Hazardous Waste Export Report

The Premcor Refining Group, Inc. - Valero Port Arthur Refinery Industrial Solid Waste Registration No. 30004
EPA ID No. TXD008090409
Regulated No. RN 102584026
Customer No. CN 601420748

Dear Administrator,

The Premcor Refining Group, Inc., is submitting this Annual Report for the 2015 calendar year for hazardous waste exported to a foreign country for metals reclamation from the Port Arthur Refinery.

This report has been prepared in accordance with the requirements of 40 CFR 262.87.

(a)(1) The EPA identification number, name, and mailing and site address of the exporter: TXD008090409, The Premcor Refining Group, Inc. – Valero Port Arthur Refinery, PO Box 909, Port Arthur, TX 77641 and site address 1801 South Gulfway Drive, Port Arthur, TX 77640

(a)(2) The calendar year covered by the report: 2015

#### (a)(3) The name and site address of final recovery facility:

- 1. Union Corporation, #548, Okmyoung-Ri, Daesong-Myon, Nam-Gu, Pohang-City, Kyungsanbuk-Do, South Korea
- 2. Metrex B.V., Sourethweg 13, 6422 PC, Heerlen, The Netherlands
- (a)(4) By final recovery facility for hazardous waste exported, a description of the hazardous waste, the EPA hazardous waste number (from 40 CFR part 261, subpart C or D), waste type from OECD waste list and applicable waste code from the OECD lists, DOT hazard class, the name and US EPA ID number (where applicable) for each transporter used, the total amount of waste shipped and number of shipments pursuant to each notification:
- 1. Union Corporation, Spent Hydrotreating Catalyst, K171, Metal Bearing Waste, B1120, DOT Hazard Class 4.2, transporter Best Transportation (transporter EPA ID# TXR000068676), 260.23 tons, 13 shipments.
- 2. Metrex B.V., Spent Hydrotreating Catalyst, K171, Metal Bearing Waste, B1120, DOT Hazard Class 4.2, transporter Jetco Delivery (transporter EPA ID# TXR000077976), 716.43 tons, 47 shipments.

Port Arthur Refinery • The Premcor Refining Group, Inc., A Valero Company P.O. Box 909 • Port Arthur, Texas 77641-0909

received

- (a)(5) Except for hazardous waste produced by exporters of greater than 100 kg but less than 1000 kg in a calendar month, unless provided pursuant to §262.41, in even numbered years:
- (i) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and

The Source Reduction Waste Minimization Plan 2012-2016 Executive Summary can be found in Attachment I.

- (ii) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984: Valero Port Arthur Refinery continues to implement provisions of the Source Reduction Waste Minimization Plan 2012-2016. As required by that plan and associated reporting requirements, the annual progress report on source reduction and waste minimization activities will be submitted by July 1, 2016 to the Texas Commission on Environmental Quality, and will be available upon request.
- (a)(6) A certification signed by the primary exporter: see Attachment II

Should you have any questions or require additional information, please contact Tim Ernst at (409) 985-1632 or via e-mail at tim.ernst@valero.com.

Sincerely,

J. Greg Gentry

Vice President and General Manager

TE/cmg

Attachments

cc: TCEQ Region 10

#### ATTACHMENT I

# SOURCE REDUCTION WASTE MINIMIZATION PLAN 2012-2016 EXECUTIVE SUMMARY



# TEXAS POLLUTION PREVENTION & WASTE MINIMIZATION PLAN

5-Year Plan for Period 2012-2016

THE PREMCOR REFINING GROUP, Inc. VALERO – PORT ARTHUR REFINERY

# TEXAS POLLUTION PREVENTION PLAN VALERO PORT ARTHUR REFINERY

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**Executive Summary** 

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## Texas Pollution Prevention Plan for Reduction of Hazardous Wastes and TRI Compound Releases for the 5-Year Period January 1, 2012 thru December 31, 2016

#### **EXECUTIVE SUMMARY**

## Description of the Facility

Company: The Premcor Refining Group, Inc.

Site: Valero Energy Corporation - Port Arthur Refinery

Physical Valero Port Arthur Refinery Mailing Valero Port Arthur Refinery

Address: 1801 South Gulfway Drive Address: P. O. Box 909

Port Arthur, Texas 77640 Port Arthur, Texas 77641-0909

Contact: Tim Ernst, Sr. Environmental Engineer

Phone: 409- 985-1632

Email: tim.ernst@valero.com

The Port Arthur refinery is an integrated oil refinery established in the early 1900's on a site which covers 3875 acres. Currently the refinery's throughput is approximately 330,000 barrels per day. Primary petroleum products include gasoline, jet fuel, kerosene, and diesel. The refinery is operated and maintained by approximately 835 Valero employees.

The Port Arthur Refinery operates under the following environmental permits and registration:

TCEQ Solid Waste Registration 30004

EPA Identification TXD008090409
 TRI ID Number 77640CLRKR1801S

SIC Code 2911
 NAICS Code 324110
 TCEQ Air Account JE0042B
 TPDES Permit 00309

# Hazardous Waste 2006 - 2010

Waste Description	TCEQ Codes	2006 (tons)	2007 (tons)	2008 (tons)	2009 (tons)	2010 (tons)
Soils contaminated w/hazardous waste	1900301H	0.00	174.59	313.81	394.86	2928.34
Spent catalyst (NiMo, CoMo, Act. Al)	3000393H	600.36	1218.91	1100.49	857.26	122.35
Sump pit or sewer box sludge	2700319Н	2286.58	817.62	923.15	61.81	107.93
Debris contaminated w/hazardous waste	2704319H	67.26	61.77	1278.79	63.54	56.24
Tank Bottoms (Clarified Slurry Oil)	2701319H	995.12	3105.41	1434.73	0.00	53.57
Calcium Fluoride off-spec	2721319H	137.05	132.89	408.59	249.47	24.31
Spent Acid Solution	0251105H	0.00	0.00	0.00	0.00	2.25
Potassium Hydroxide (443 HFAU, KOH)	0452109H	3.28	2.55	2.28	2.33	1.73
Aerosol Cans	6003801H	0.00	0.00	0.00	0.38	0.41
Chemical Lab Pack	0001001H	0.00	0.04	0.02	0.20	0.41
Spent Acid with metals (COD Vials)	0150103H	0.55	0.26	0.33	0.44	0.30
Petroleum distillates (Lab, Silica Gel)	1550211H	0.00	0.10	0.00	0.08	0.05
Mercury contaminated waste	2705319H	0.01	0.02	0.00	0.00	0.00
Halogenated Solvents	1100202H	0.08	0.00	0.63	0.00	0.00
Unused Chemicals	1600219H	0.10	0.01	0.00	0.00	
Blasting Sand	2706319H	0.00	0.60	0.00	0.00	0.00
Exchange Sludge & Sand	2727319Н	0.00	65.31	0.00	V	0.00
Platinum Catalyst	3005393H	0.00	0.00		0.00	0.00
Compressed Cylinders	6002801H	0.00	0.00	0.00	55.73 0.17	0.00
	Totals	4090.38	5580.24	5462.81	1686.26	3297.77

TRI Releases 2006 - 2010

Chemical Name	2006 (lbs/yr)	2007 (lbs/yr)	2008 (lbs/yr)	2009 (lbs/yr)	2010 (lbs/yr
Sulfuric Acid	34599	25678	28360	34,350	33,46
Nitrate Compounds	25347	28636	21573	31,619	24,13
Ammonia		1980	1440	22,195	20,72
Cyclohexane	16581	17101	9625	10,795	15,11
Benzene	11172	11959	10921	14,741	13,33
Toluene	14717	23384	24791	12,206	12,30
Propylene	22819	28721	64494	10,283	10,04
n-Hexane	17349	6843	15962	12,516	9,51
Ethylene	18717	39659	17753	9,604	8,86
Xylene-mixed isomers	3041	3738	3697	6,855	5,74
Carbonyl Sulfide	8388	7928	3370	8,658	5,05
Carbon Disulfide	1955	2813	1184	3,424	3,15
Nickel Compounds	1663	1867	1449	2,846	2,25
Ethylbenzene	1994	8038	4023	2,189	1,979
Lead Compounds	268	628	226	264	1,574
Zinc Compounds	973	1101	830	2,052	1,572
Cyanide Compounds	158	91	72	1,315	1,096
1,2,4-Trimethylbenzene	292	3144	965	1,320	903
Styrene	253	264	583	1,057	733
Manganese	940	946	525	621	
Hydrogen Cyanide	95	91	72	3,135	622
Chlorine	379	362	288	356	509
Phenol	343	50	154	303	297
Chromium Compounds	376	288	211	249	274
Hydrochloric Acid	1151	81	79	175	251
Cumene	3866	9771	4228		153
1,3-Butadiene	535	174	215	210 96	152
Cresols	106	119	90	124	113
Phenanthrene	108	122	92		93
Anthracene	107	120	90	115	88
2,4-Dimethylphenol	106	119	90	114	87
Naphthalene	831	2955	1507	113	86
Cobalt Compounds	20	2333		88	64
Molybdnum Trioxide	10	26	18	57	56
Polycyclic Aromatic Compounds	227	217	23	16	20
Mercury Compounds	14	14	173	12	12
Biphenyl	0	14	12	9	8
Benzo(g,h,i) perylene	1	1	0	5	3
Certain Glycol Ethers	0		0	1	1
Diethanolamine	0	0	0	0	0
Hydrogen Fluoride	1209	0	0	0	0
Tetrachloroethylene	0	0	0	0	0
	U	0	0	0	0



# List of Pollutants and Contaminants to be Reduced

Priority Waste Code		Pollutants/Waste to be Reduced		
1	2700319H	Sewer Box Sludge		
2	2704319H	Hazardous Debris		
3	2701319Н	Tank Bottoms		
4	0452109H	Potassium Hydroxide		

#### Reduction Goals

Valero has defined several specific and general goals for waste minimization in the Port Arthur Refinery. These goals are:

- Reduce the risk to human health and the environment,
- Reduce the cost of waste management, and
- Reduce the potential liability of waste management methods.

The table below indicates the anticipated reduction of the hazardous waste streams chosen for this P2 plan.

Waste to be Reduced	Reduction (percent)	Reduction (tons)	Project
Sewer Box Sludge	40%	43.2	Removal of debris from the sewer box sludge; through separation and prescreening, will allow more onsite recycling of this waste stream.
Hazardous Debris	20%	11.2	By segregating the scrap metal and e-waste from the debris waste stream will reduce hazardous waste disposal volumes and increase recycling.
Tank Bottoms	100%	53.6	Changing tank cleaning process for Clarified Slurry Oil (CSO) tanks will allow tank bottoms to be recycled onsite. Also explore recycling tank bottoms into coke drum feed line to obtain higher volumes of recyclable materials.
Potassium Hydroxide (KOH)	100%	1.7	Routing the KOH waste stream to the spent caustic tank allows the KOH to be regenerated for reuse.

#### Environmental and Human Health Risks Considered

All projects at the Valero Port Arthur Refinery are reviewed by a team of environmental, engineering, operations, maintenance and management to determine validity of the project. One of the main purposes of the review is to determine if there will be any adverse affects on employees and the surrounding community. Other aspects of the review also include potential environmental impacts including whether or not the project will increase the amount of an existing pollutant or cause a new pollutant to be released (new waste stream). The system in place is designed to take into account all of these aspects to determine if a project is viable or not. By doing this Valero assures that if a project moves forward then the issue of hazardous waste and TRI releases are addressed before hand, appropriate measures are taken to address any issues and every effort is made to minimize potential impacts therefore leading to reduced impacts on human health and the environment.

#### Implementation Schedule

#### Sewer Box Sludge

- 2012 Develop a screening and segregation process to remove debris from sewer box sludge.
- 2013 Train employees and implement screening and segregation process.

#### **Hazardous Debris**

- 2012 Train employees on proper segregation of recyclable materials.
- 2012 Establish profile for e-waste and begin recycle program.

#### **Tank Bottoms**

- 2012 Develop and implement new tank cleaning process for CSO tanks.
- 2012 Research coker injection into the coke drum feed line.
- 2013 Begin planning for installation of piping for of coke drum feed line injection.
- 2014 Have material ready for installation and install during next DCU outage.
- 2015 Begin feed side injection if piping installations are complete.

#### Potassium Hydroxide

- 2012 Complete MOC for piping KOH sample station to spent caustic tank.
- 2013 Complete piping assembly and begin KOH recycling.



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#### Media Transfers

#### Sewer Box Sludge

The Valero Port Arthur Refinery uses an EPA approved process that inserts sewer box sludge and other oil-bearing hazardous materials back into the refinery system. The oil is recovered and put back into the process in either FCC Unit or the Crude Unit. The wastewater is returned to the WWTU for treatment and the sludge is inserted into the Delayed Coking Unit (DCU) to a petroleum coke.

Veolia Process Solutions (Veolia PS) has a recycling process unit constructed onsite to provide these services. However if large volumes of oversize debris are mixed in with the sewer sludge, Veolia PS will not be able to process the material. Through separation and prescreening of the waste prior to entering the Veolia PS process, Valero should be able to process more oily sludge versus offsite disposal at an incinerator. The hazardous debris that is separated from the sewer box sludge will be disposed of as hazardous waste.

#### **Hazardous Debris**

Metal sewer pipe is sometimes discarded with other hazardous debris from the refinery. By segregating the pipe from the other debris and hydro-blasting the pipe free of contaminants, this material can be sold as scrap metal. The waste generated from the hydro-blasting will either go for disposal as hazardous waste or the material will be recycled to the coker. The disposition of this material is based on the oil content of the waste.

Segregation of the e-waste material from the hazardous debris will not transfer any pollutants to other media.

#### **Tank Bottoms**

The additional hydrocarbons and chemicals used to adequately prepare the CSO tank bottoms for coker injection will be recovered at Veolia PS and then recycled to the refinery feedstock tanks. The only media transfer would be from the debris generated during the tank cleaning operation. This debris will have to be disposed of as hazardous waste.

#### Potassium Hydroxide

By routing the KOH sample station stream to the spent caustic tank, Valero does not anticipate any transfer of pollutants to other media as a result of this project. The spent caustic from the spent caustic tank is periodically sent offsite for regeneration and reuse.

## **OWNER'S CERTIFICATION**

I certify that this pollution prevention Plan has been prepared according to and meets the specified requirements of Senate Bill 1099 of the 72nd Texas Legislature, the Solid Waste Disposal Act, and 30 TAC §335.471 – 335.480, and that the information provided herein is true, correct, and complete.

I also certify that I have the authority to commit the corporate resources necessary to implement this plan.

J. Greg Gentry, Valero Energy Corporation

Port Arthur Refinery

Vice President and General Manager

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#### ATTACHMENT II

PRIMARY EXPORTER CERTIFICATION

#### Certification by Primary Exporter

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

J. Greg Gentry, Vice Prevident and General Manager

2/25/14

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ost Office Box 909 • Port Arthur, Texas 77641-0909

ORT ARTHUR REFINERY

VALERO

# Route

To: Enforcement and Compliance



International Compliance Assurance Division (2254 A) U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, N.W. Washington, D.C. 20460 Office of Enforcement & Compliance Assurance Office of Federal Activities

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**EPA Mail** 

Mailstop: ARIEL RIOS NORTH

Department: 2254A

Certified

